## Remarks

This Amendment is responsive to the Office Action mailed December 2, 2004 in connection with the above-identified patent application. In that Action, pursuit to 37 C.F.R. § 1.114, the finality of the previous Office Action was withdrawn, and applicant's submission filed April 12, 2004 was entered into the record. Claims 1-28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,315,709 to Alston, Jr., et al.

### A. The Present Application:

The system of the present application provides a mechanism which enables users to determine the lineage of warehouse data by traversing a transformation model. The subject system provides users with a tree structure that represents the data the users wish to view. The system allows users to select any data that they want to access which can be anywhere on the tree. If the users have questions about how the data they are looking at was derived, the users navigate the information catalog via the tree structure to see any "transformations" that were applied to generate the data. From this point, the users can continue with their data analysis or continue to follow the lineage by looking at the metadata about the source data. The present system enables users to drill from the target warehouse data back to the original source data and learn how the target warehouse data was derived.

Accordingly, the present system is especially advantageous in that it is used to describe a process applied to data. More particularly, the present system describes the transformation of data as it moves in a data warehouse. Moreover, the system defines the lineage of data. That is, the system indicates to the user what the sources for the warehouse were and/or the modification(s) that resulted in the current state of the data and enables the user to navigate the data.

### B. U.S. Patent No. 5,315,709 to Alston, Jr., et al.:

The Alston patent teaches a system and apparatus for simply transforming objects in a first data model (source design objects) to objects in a second data model (target design objects) and synchronizing the two data models.

In the preferred embodiment described, the first data model is an extended entity model and the second data model is a relational data model. In the Alston patent, the objects in the first and second data models are the same data, merely transformed. Further in Alston, the only action described with regard to the source design objects and target design objects is a synchronizing process for use between the two data models.

**All Claims are in Condition for Allowance:**

Referring to the Office Action in greater detail, all pending claims were rejected as being anticipated by the Alston patent. More particularly, the Examiner, as in the previous Office Action, and particularly in reference to independent claims 1, 7, 13, 19, and 27-28, continues to take the position in the record that "Alston discloses a computer system with means/methods/computer program product to perform the functions as claimed by applicant comprising:

a) a computer having a memory, and a data storage device coupled thereto that stores data;

b) one or more computer programs, performed by the computer, for, in response to receiving user input, selecting a target object in an information catalog and providing information about a source data from which the target object was derived via a transformation performed on contents of the source data;

c) a plurality of objects including a target object wherein the target object was derived from one or more transformations of one or more sources of data;

d) a transformation lineage system which stores transformation lineage information for the target object, the transformation lineage information associating the target object with the one or more transformations and identifying the one or more data sources;

e) a user interface for receiving user input for selecting one of the plurality of objects; wherein, the user interface configure (sic) to display the transformation lineage information in response to receiving user selected input."

The Examiner, in a "Response to Arguments" section of the Action attempts to summarize applicant's arguments against Alston as the following:

a) the prior art fails to include the limitation of navigating data; and

b) Alston's patent does not teach providing information about source from which a target was derived via a transformation performed on the source data to derive the target object.

Regarding summarization a) above, the Examiner asserts that, e.g., claim 1 merely recites "navigating data" in the preamble and does not affect the steps recited in the body of that claim. The Examiner, therefore, concludes that the claimed method is broad enough to read on the fact that a user is using the window system to navigate the relationships between design objects in different design space of the system. Although applicant's do not agree that the subject claims can be so broadly interpreted as to read on Alston, each of the subject independent claims 1, 7, 13, 19, and 27-28 has been amended to more clearly recite the limitation of a user navigating data or data objects.

Further in this regard, Alston is "directed to a computer implemented system and apparatus for transforming objects in a first data model (source design objects) to objects in a second data model (target design objects) and synchronizing the two data models" (Abstract), and is not directed to a system with the ability of a user to navigate data. None of the rejected claims recite transforming objects from first to second data models and synchronizing the two data models as in Alston. Applicants respectfully remind the Examiner that, in the previous response mailed July 29, 2004, it was respectfully requested that the Examiner cite some further evidence that synchronizing data of two data models is equivalent or substantially the same as navigating data because the rejection implies that navigating data and synchronizing data are substantially the same elements. However, the Examiner still has provided no evidence to substantiate this assertion that navigating data and synchronizing data are the same or obvious variants.

With reference now to summarization b) above, the Examiner asserts that Alston discloses the transformation of the source data to derive the target object via keys, citing col. 17, line 45 – col. 18, line 20, and Fig. 6. The Examiner further asserts that the split screen provides information about source (152 in Fig. 6) from which a target object (154 in Fig. 6) was derived.

Applicants respectfully traverse the Examiner's position regarding the teachings of Alston. The Examiner has perhaps misunderstood and, therefore, misinterpreted Fig. 6 and the cited columns of Alston. Brief overviews of the embodiments described by Alston and the present application are in order here to clarify the novel features claimed by applicants.

The Abstract of Alston simply describes synchronization of two data models i.e., source design objects and target design objects. However, the target and design models (52 and 62 in Fig. 1B and 1C, col. 8, lines 26-34) are not collections of data from the DB2 database 46 but, rather definitions of different views of the data objects in the database 46. To clarify this further, quoting from col. 1, lines 23-31, "The implementation of an information management system utilizing database management technology involves the concept of dual data representation: i.e., logical representation; and physical representation. Logical representation relates to the form in which the data records are presented to and interact with the system user. Physical representation relates to the form in which individual data records are stored and how the records are manipulated by the computer system." Alston only discloses one source for data objects, namely the DB2 catalog 46 which is viewed differently by different users, e.g., an Entity-Relationship (E-R) type of data model versus a relational model where the objects are represented by tables and associated columns (col. 1, line 65 – col. 2, line 8).

The transformations disclosed in Alston relate to design object transformations (Abstract), rather than target data transformations as described in the present application. For example, Alston describes a first data model as an extended entity data model and a second data model as a relational data model, and the objects being transformed are design objects, not data objects (col. 4, lines 28-40). The data models are used to interact with the database 46 via the SQL file 16 (col. 7, line 64 – col. 8, line 6).

With regard to synchronization, Alston teaches synchronization of the data models in the design spaces 50 and 60 (col. 9, lines 58-68), but is silent with regard to synchronization of target data because there is only one source for target data, namely the database 46, and no synchronization is needed.

With reference to Fig. 6 of Alston, the Examiner cited this as an example of transformation of source data, however, Alston is only describing processing the relationship between entities as objects (col. 17, lines 45-47), and there is no suggestion of navigating data targets in the DB2 database 46. Nor is there any suggestion in Alston that the data in the database is transformed; only the design by which the data is accessed is transformed, either from an extended entity model to a relational model (forward engineering), or vice versa (reverse engineering), as defined in col. 2, lines 17-28.

As opposed to Alston, however, the present application allows a user to access data derived from any number of database sources on one or more data processing nodes (page 5, lines 26-29). The information catalog system permits users to find what data is available in their environment, and to organize the data in the information catalog system, and to access the data itself when needed (page 5, lines 19-25). Because the information catalog system enables users to determine what information should be captured as warehouse data, what it is called, and how it is organized, a transformation lineage model is provided as a mechanism to advantageously enable a user to determine the lineage of the warehouse data by traversing a transformation model. The system allows users to select any data that they want to access, which can be anywhere on a tree. If the users have questions about how the data they are looking at was derived, the users can navigate the information catalog via the tree structure to see any "transformations" that were applied to generate the data. Alston does not teach any such transformations of data, but rather, only the transformation of one design model to another which is unrelated to target data transformations. A user may access the data in the database 46 of Alston by either of the disclosed design models, but there is no suggestion or teaching that the data itself is transformed, let alone a teaching that the user may view information about how the data was transformed.

For at least the above reasons, and particularly because the subject independent claims have been amended to more clearly include the limitation of navigating data, it is respectfully submitted that the Alston, Jr. '709 patent does not teach, suggest, or fairly disclose the invention recited in the pending claims. A withdrawal of the rejection of those claims over this prior art patent is respectfully requested.

## Conclusion

For at least the above reasons, applicant respectfully submits that all pending claims are patentably distinct and unobvious over the reference of record.

Allowance of all pending claims and early notice to that effect is respectfully requested.

Respectfully submitted,

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